Claims

1. A design apparatus for a tubular fabric, the apparatus designing the tubular fabric composed of front and rear fabrics and producing knitting data allowing a flat knitting machine having at least a pair of front and rear needle beds to knit the tubular fabric, being characterized by:

a monitor to display an external shape of the front and rear fabrics and a pattern on the fabrics;

pattern input means for receiving input of a pattern extending to both the front and rear fabrics and for receiving input of a start point in the fabrics according to the designation of the point on the monitor by a user; and

pattern development means for developing the pattern along with a direction around the front and rear fabrics from the start point in such a way that the developed pattern extends to both the front and rear fabrics and is substantially continuous at an edge between the front and rear fabrics,

wherein species of stitches in the fabrics are designated so as to express the pattern in front and rear fabrics by the pattern development, and

wherein species of face and rear stitches and racking direction along a left and right direction are inverted when the pattern crosses said edge.

2. The design apparatus for the tubular fabric of claim 1,

wherein the pattern development means is adapted for repeating an unit pattern in such a way that the repeated unit patterns round the front and rear fabrics when the pattern inputted from the pattern input means includes repetition of the unit pattern, and

wherein the pattern developed so as to round the front and rear fabrics is displayed on the monitor in composition with the external shape of the fabric.

3. The design apparatus for the tubular fabric of claim 1,

wherein the pattern development means determines a needle thereto to transfer a stitch to be transferred across said edge, in the opposite needle bed to the one when transfer is made within the edge, as reversing from the edge according to a stitch number across the edge.

4. The design apparatus for the tubular fabric of claim 2, being characterized by

detection means for detecting discontinuity in the pattern due to discrepancy of stitch number when the unit pattern is developed so as to round the front and rear fabrics.

5. The design apparatus for the tubular fabric of claim 4, being characterized by

stitch number adjustment means for displaying the discontinuity in the pattern on the monitor, for displaying on query whether adjustment in the stitch number is done, and for adjusting the stitch number of the front and rear fabrics, in response to input requesting the adjustment in the stitch number, so as to make the pattern substantially continuous.

6. A design method for a tubular fabric having front and rear fabrics, the method producing knitting data allowing a flat knitting machine having at least a pair of front and rear needle beds to knit the tubular fabric, being characterized by:

displaying an external shape of the front and rear fabrics on a monitor;

receiving input of a pattern extending to both the front and rear fabrics and for receiving input of a start point of the pattern by user's designation of the point in the fabrics on the monitor; and

developing the pattern along with a direction around the front and rear fabrics from the start point in such a way that the developed pattern extends to both the front and rear fabrics and is substantially continuous at an edge between the front and rear fabrics,

wherein species of stitches in the fabrics are designated so as to express the pattern in front and rear fabrics by said development,

wherein species of face and rear stitches and racking direction along a left and right direction are inverted when the pattern crosses said edge, and

wherein the developed pattern is displayed on the monitor in composition with the external shape of the front and rear fabrics.